

**Commonwealth of Kentucky**  
**Division for Air Quality**  
***COMMENTS AND RESPONSE***  
**ON THE DRAFT PERMIT**

Title V / Synthetic Minor, Construction / Operating

Permit: V-06-052 Revision 1

ISP Chemicals, LLC

Calvert City, KY 42029

September 10, 2008

Andrew True, Reviewer

SOURCE ID: 21-157-00003

SOURCE A.I. #: 2939

ACTIVITY ID: APE20080001

Comments on ISP Chemical LLC Synthetic Organic Chemical plant Draft Title V Air Quality Permit submitted by Corinne Whitehead, President – Coalition For Health Concern, Inc, Benton KY.

**1 Title V Permit – General Comments**

The general consensus of the public is that the air has deteriorated drastically in Western, Kentucky over the past 5 years. Commercial aircraft pilots, physicians, and ordinary citizens have expressed frustration over the visible blue smog that permeates the air on many days. It is generally viewed that the blue pall is ozone. The area is acutely impacted by fine particles from numerous coal burning power plants in Western Kentucky, Southern Illinois, and Southern Indiana. The Paducah Gaseous Diffusion Plant that Enriches uranium for nuclear power plants “all over the world” only uses coal fired power plants that have been “grandfathered” permit-wise, and have always violated the clean air regulations. The power requirements for the enrichment process has been compared to the total power used by the city of St. Louis daily.

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*Division’s response: Comments noted.*

**2 Title V Permit**

The air pollution is an acute health hazard, and an Environmental Justice issue. A remote Sensing Study has shown damage to the oak and hickory forests within a wide radius of the Calvert City chemical complex.

1) We urge the Division of Air Quality to place an operating cap on the BLO process unit in this permit for VOC and SO<sub>2</sub>.

2) Enhanced monitoring of the VOC and SO<sub>2</sub> emissions.

3) We insist that the Division of Air Quality perform an audit of all Calvert City, Kentucky industrie’s emissions of VOC’s, SO<sub>2</sub>, NO<sub>x</sub>, CO, and HAPS’s and report to the public.

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*Division's response: Comments noted. The requirements in the ISP Chemical Permit are based on state and federal regulations. An operating cap on VOC and SO<sub>2</sub> emissions would not be based on regulation or has been requested by the facility to preclude applicability of any regulation. Sources are required to demonstrate compliance with federal and state regulations. Concerning monitoring, within this permit (V-06-052 R1), 401 KAR 61:015 applies to SO<sub>2</sub> emissions from the Riley Boiler (Emission Unit OAA) and Babcock & Wilcox Boiler (Emission Unit OAB). 401 KAR 59:015 applies to SO<sub>2</sub> emissions from the Zurn Boiler (Emission Unit OZU) and the West Paracymene Heater (Emission Unit WPH). Various state and federal regulations apply to VOC emissions, including 401 KAR 50:012, which applies to the BLO Process Unit. Concerning an audit of emissions, all major sources of emissions, including those located in Calvert City, Kentucky, periodically report emissions of VOC, SO<sub>2</sub>, NO<sub>x</sub>, and HAPS.*

Comments on ISP Chemical LLC Synthetic Organic Chemical plant Draft Title V Air Quality Permit submitted by Jeffrey Ammons, Senior Environmental Engineer – ISP Chemicals LLC, Calvert City, Kentucky.

## **1 Statement of Basis, Page 1 – MON Group 1 Wastewater Extension**

In a July 31, 2008 letter from the Division, an extension was granted allowing a second six month extension time frame to obtain compliance with the MON Group 1 Wastewater controls. The original six month extension is referenced in the draft permit along with the then planned compliance date of November 10, 2008. The permit reference should now list a 12-month extension and the new compliance date of May 10, 2009.

The extension language is repeated in several locations in the permit. Following is a listing of those places that also need to be revised to incorporate the added extension outlined above:

- Draft Permit Page 23 – Applicable Regulations (Wastewater Treatment)
- Draft Permit Page 101 – Applicable Regulations (General Requirements)
- Draft Permit Page 157 – Applicable Regulations (Process Wastewater)

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*Division's response: The comments are acknowledged and the suggested changes have been made to the Statement of Basis and permit revising the compliance date to May 10, 2009.*

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## **2 Statement of Basis, Page 2 – Methyl Vinyl Ether Unit:**

This section needs to be revised to correctly state operations within ISP's Methyl Vinyl Ether unit (MVE). The error was carried over from the original permit application; however it was missed by ISP and the Division during the comment period. The language for this section was from the original Permit Application (October 6, 2006) in the Process Description for the MVE unit. When it was incorporated into the Statement of Basis, the second paragraph of the section was omitted. Following is a republication of the original second paragraph of that section:

ISP is planning to add two reclaim dryers and a reclaim wash tower, along with other minor equipment, to allow the production of virgin MVE and the simultaneous reclamation of MVE. This will result in an overall increase in MVE output from the unit. Emission rates in this application incorporate these proposed changes. Further discussion of this project is included in the "Proposed New Construction and Modification" section later in this application.

The Proposed New Construction of the Reclaimed MVE equipment was installed in 2007. Therefore the section listed in the Statement of Basis is in error since both the Virgin and Reclaimed MVE units can and do now operate simultaneously. The language should be revised to correct the inaccurate statement.

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*Division's response: The comment is acknowledged and the Statement of Basis has been revised to accurately describe the operation of the Methyl Vinyl Ether unit (MVE), which is now capable of operating both the Virgin and Reclaimed MVE units simultaneously.*

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### **3 Statement of Basis, Page 5 – Comments: Applicable Regulations**

ISP believes that references to 40 CFR 61, Subpart J, Subpart V, Subpart Y and Subpart FF should be removed from the Applicable Regulations section. 40 CFR 63 Subpart FFFF Miscellaneous Organic Chemical Manufacturing (MON) supersedes the referenced 40 CFR Part 61 requirements. Therefore ISP removed references to those standards in our permit application. ISP has replaced the Part 61 requirements with the relevant portions of the MON regulations. Monitoring, recordkeeping and reporting requirements will now be conducted in accordance with MON. The above referenced Part 61 sections should be removed from the listing and added to the Non-Applicable Regulation section of the 240 Building (Draft Permit Page 96).

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*Division's response: The comment is acknowledged. The Division does not concur. 40 CFR 61, Subpart J, Subpart V, Subpart Y and Subpart FF are regulations that apply to the facility. No exemptions are listed within 40 CFR 61, Subpart J, Subpart V, Subpart Y and Subpart FF which would deem 40 CFR 61 regulation "non applicable" due to 40 CFR 63 Subpart FFFF applicability. Pursuant to 40 CFR 63.2535, a number of exemptions are offered where a source which that is subject to 40 CFR 61 regulations may elect to comply with the requirements of 40 CFR 63 Subpart FFFF to show compliance with the applicable 40 CFR 61 regulations. These exemptions are clearly stated, citing specific regulations which apply, on page 28 of the permit. All applicable regulations must remain listed in the V-06-052 R1 Permit and Permit Statement of Basis.*

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### **4 Draft Permit Pages 2, 3, 5, 6, 8 and 9 – Reasonable, Available and Practical Requirements.**

Applicability of 401 KAR 50:012 Section 1(2) For Units BL1 and BL2, PY1 and PY2, and VP1 and VP2, the draft permit includes a first-time operating limitation based upon 401 KAR 50:012 Section 1(2). The draft operating limitation provides that "all major air contaminant sources shall, as a minimum, apply control procedures that are reasonable, available, and practical." The Units at issue were largely constructed in the 1960s, although some of the equipment was added at later dates up to 1994. For the compliance demonstration method, the draft permit would require ISP to submit a reasonable, available, and practical (RAP) control technology analysis for VOCs within 60 days after issuance of the final permit revision.

ISP does not believe it is appropriate to include this provision in the permit. First, 401 KAR 50:012 Section 1(2) actually provides:

In the absence of a standard specified in these administrative regulations, all major air contaminant sources shall as a minimum apply control

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procedures that are reasonable, available, and practical.

(Emphasis added). In reviewing the history of the administrative regulations, it appears this regulation was first promulgated in 1979 and appeared at 401 KAR 50:005. (See Attachment 1). The provision clearly applies to sources as a whole, as opposed to individual affected facilities. Note that in 1979, the definitions at 401 KAR 50:010 defined both “affected facility” and “source.” (See Attachment 1). If the regulation were intended to apply to unregulated “affected facilities,” the regulation would have been drafted in that manner. Moreover, the regulation was certainly intended to, at most, establish a one-time requirement that applied at the time of promulgation of the regulation for existing sources or, thereafter, at the time of the construction of the unit.

Accordingly, ISP requests that this provision be deleted from the draft permit for the permit revision for the following reasons:

1. The “major air contaminant source” at issue here is subject to numerous control standards, including MACT, NSPS, and PSD provisions for various units. Therefore, as standards currently apply to this “major air contaminant source,” 401 KAR 50:012 Section 1(2) by its terms does not appear to be applicable. Moreover, the units at issue would be subject to regulation with respect to wastewater emissions under EPA’s proposed rule at 40 CFR Part 60 Subpart YYY. See 63 Fed. Reg. 67988 (Dec. 9, 1998). That proposed rule is still pending, but would certainly eliminate any potential applicability of 401 KAR 50:012 Section 1(2).
2. Even if 401 KAR 50:012 Section 1(2) was applicable to each unit at a major air contaminant source that was not subject to another standard, any such requirement should apply as of the time of construction of the unit (or at the time of regulation promulgation (1979) for existing units). It should not be construed as a continuing standard that potentially changes with time. For example, BACT and MACT are determined at one point in time for a unit. As written, this draft permit condition could be construed as applying and requiring controls that are reasonable, available, and practical as of 2008 even though the equipment at issue may have been constructed in the 1960s. Another concern with a contrary interpretation is that it could require a new RAP control technology analysis be conducted during a next permit renewal. Therefore, although ISP does not believe this provision is applicable since the source as a whole is subject to standards, at most the RAP control technology analysis should apply as of June 1979 (the regulation promulgation date) or any later date of construction of the equipment. Another potential concern with the permit condition is that, to our knowledge, there is no guidance or other information to indicate how to conduct a RAP control technology analysis since it is clearly a lesser standard than reasonably available control technology (RACT), which is required for major sources in nonattainment areas.

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Finally, it also is inappropriate to include these new first-time conditions in a draft

permit revision for emission units that are not the subject of the permit revision application. Under 401 KAR 52:020 Section 4, applications for permit revisions are only to provide the information related to the change, as was the case here. It follows that the permit revision should only address units that are the subject of the permit revision application. This is also consistent with 401 KAR 52:020 Section 19 relating to reopening a permit for cause. Accordingly, if the regulation were applicable, it would be more appropriate to address it during the Title V renewal process, which would also allow the issue of RAP to be addressed in the application.

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*Division's response: The comments are acknowledged. As stated in the permit, compliance shall be demonstrated by submitting a Reasonable, Available, and Practical (RAP) control technology analysis for sources emitting VOC, within 60 days after issuance of final permit V-06-052 Revision 1 and following the selected control procedures.*

*401 KAR 50:012 Section 1(2) specifies that in the absence of a standard in the Kentucky Administrative Regulations, all major air contaminant sources shall as a minimum apply control procedures that are reasonable, available and practical.*

*ISP Chemical LLC in Calvert City, Kentucky is a major source for VOC emissions. The Units BL1, BL2, PY1, PY2, VP1, and VP2 emit VOC and there is not an applicable emission standard specified in the Kentucky Administrative Regulations for these units. Therefore, 401 KAR 50:012 requires that reasonable, available, and practical control procedures be applied to these units.*

*The US EPA has published numerous Control Measures Guidance Documents also referred to as Control Techniques Guidelines (CTGs) and Alternative Control Techniques documents (ACTs) for VOCs. ISP Chemicals should refer to these documents for guidance when preparing the required analysis. ISP Chemical LLC may also use the proposed regulations in 40 CFR 60 Subpart YYY as guidance for developing a RAP control technology analysis.*

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## **5 Draft Permit Pages 14 and 96 – Methanol Storage Tanks**

ISP has noted that there is an error in the description of two of the three Methanol Storage Tanks listed on the above referenced pages. Tanks identified as 333/3002 and 333/3003 are reversed. 333/3002 is the Methanol Vapor Balance Tank and 333/3003 is the Methanol Storage Tank. Please correct the error with the correct information.

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*Division's response: The comment is acknowledged. The permit has been revised on pages 14 and 96 as suggested by the comment.*

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**6 Draft Permit Page 43 – Group 1 Batch Vents (236 Building)**

There appears to be a typographical error in the last sentence of the page. The cite shown in sentence is 40 CFR 63.982 ©; ISP believes it should be listed as 40 CFR 63.982 (c).

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*Division's response: The comment is acknowledged. The citation on page 43 of the permit was changed to 40 CFR 63.982 (c) as suggested in the comment.*

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**7 Draft Permit Page 57 – Venturi Scrubber 200/5369 c. (200 Building)**

Item (5) of the section, states “The pressure gauges are calibrated manually”. ISP believes the intent of Division was to ensure that the pressure gauges are calibrated annually.

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*Division's response: The comment is acknowledged. Item (4) on page 57 was changed to state “The pressure gauges are calibrated annually.”*

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**8 Draft Permit Page 70 – Specific Monitoring Requirements c. (Riley Boiler)**

Item (3) of the section, states “Pressure taps are located on the inlet and outlet of the Venture Scrubber”. The subject Riley Boiler is equipped with a baghouse for air emission control. ISP believes the reference is in error and the language should be revised, replacing the term Venture Scrubber with Baghouse.

Item (4) of the section has the same language as Comment 7 requiring manual calibration. ISP believes the intent of the requirement is to have the pressure gauges calibrated annually.

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*Division's response: The comment is acknowledged. Item (3) on page 70 was revised by replacing the term Venture Scrubber with baghouse. Item (4) on page 70 was changed to state “The pressure gauges are calibrated annually.”*

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**9 Draft Permit Page 112 – Compliance Report Schedule g. (General Requirements)**

There appears to be a typographical error in section (b)(1). The requirement states that “the first compliance report must cover the period beginning on May 10, 2008 and ending on December 31, 2009”. The referenced cite 40 CFR 63.2520 (b)(1) states that the first compliance report covers “the first date (June 30 or December 31) following the end of the first six months after the compliance date”. Since the compliance date for MON was May 10, 2008, the first compliance report period would cover dates May 10, 2008 through December 31, 2008.

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*Division's response: The comment is acknowledged. Page 112 section (b)(1) of Compliance Report Schedule was revised as suggested by the comment. The first compliance report must cover the period beginning May 10, 2008 and ending December 31, 2008.*

**CREDIBLE EVIDENCE:**

This permit contains provisions which require that specific test methods, monitoring or recordkeeping be used as a demonstration of compliance with permit limits. On February 24, 1997, the U.S. EPA promulgated revisions to the following federal regulations: 40 CFR Part 51, Sec. 51.212; 40 CFR Part 52, Sec. 52.12; 40 CFR Part 52, Sec. 52.30; 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12, that allow the use of credible evidence to establish compliance with applicable requirements. At the issuance of this permit, Kentucky has only adopted the provisions of 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12 into its air quality regulations.